How to visualize and evaluate decision options

Step by step

Target audience: everyone interested,
no special knowledge necessary

Reading time: about 25-30 minutes

Page layout: allows easy reading
without scrolling,
even on
very small screens

Author: Edgar Hartel

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Before we begin, you may want to know this:

This text is a (slightly edited) excerpt from the book
'Decision making, politics and quality of life' by Edgar Hartel.

Most examples, and all persons or organizations
appearing in them, are invented.

Contents

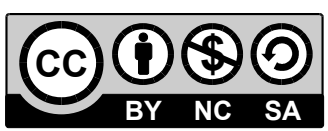
of the

PDF e-book

Decision Making, Politics and Quality of Life

by

Edgar Hartel



Chapters

Appendices

How to visualize and evaluate decision options

Step by step

Estimated reading time: 25-30 minutes

The 'how to' section
starts on p. 361
[p. 9 of this excerpt].

Before that, there are 2 pages
about the 'why'.

The summary section (p. 427 [75])
includes a 1 minute description
of a 'multi-party decision matrix'.

Such a diagram is part of a
decision making process.

For information about complete
(full-scale) processes,
rather see appendix E of the
original book.

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Let's assume you are facing a complex decision making situation.

Making a decision support diagram is work. Additional work, it may seem.

So why bother?

Because it helps you to avoid the problems a bad decision would cause.

This is the primary reason.

There are 4 secondary reasons on the next page.

1. Overview

Decisions made without overview over the situation produce random results. Without overview, you're partially blind.
A good diagram gives overview.

2. Communication

You may want, or need, to communicate your considerations to others. A good diagram can do this very efficiently.

3. Cooperation

You may want, or need, to cooperate with others. A diagram that shows what each party thinks makes this easier.

4. Documentation

You may want, or need, to document your considerations. A good diagram can replace many, many pages of text.

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Basic diagram (decision matrix)

We start out with a basic 'decision matrix'.

This is a table where you first arrange your decision options and your criteria as column/row headings.

(Only 2 of each are shown in this example. Normally there are many more.)

Fig. F.1a : basic diagram (decision matrix)

Basic diagram (decision matrix)

	Option 1	Option 2
Criterion 1	Rating	Rating
Criterion 2	Rating	Rating

The cells in this table (or matrix) can then be filled with your ratings.

A rating expresses your judgement (or evaluation) of an option/criterion combination.

Fig. F.1b : basic diagram (decision matrix)

Basic diagram (decision matrix)

	Buy 'discount price' product A	Buy 'premium edition' product B
Purchase price	affordable	quite expensive
Build quality	somewhat flimsy	good

That might look like the example on the left.

Fig. F.1c : basic diagram (decision matrix)

Basic diagram (decision matrix)

	Buy 'discount price' product A	Buy 'premium edition' product B
Purchase price	affordable	quite expensive
Build quality	somewhat flimsy	good

But when dealing with many ratings, you need to use a rating scale instead of individual phrases (such as 'affordable').

Otherwise you will lose overview.

Fig. F.1d : basic diagram (decision matrix)

Rating scale

Rating :	very negative	negative	moderately negative	neutral	moderately positive	positive	very positive
Symbol (score) :	--- (-3)	-- (-2)	- (-1)	o (0)	+ (+1)	++ (+2)	+++ (+3)

This scale is very useful.

3 degrees of 'positive' or 'negative' give enough precision in most situations, but are still easy to handle.

But it's not complete yet.

Fig. F.2a : rating scale

Rating scale

Rating :	not acceptable	very negative	negative	moderately negative	neutral	moderately positive	positive	very positive
Symbol (score) :	! (n/a)	--- (-3)	-- (-2)	- (-1)	o (0)	+ (+1)	++ (+2)	+++ (+3)

We also need a
'not acceptable' rating.

Unlike the other ratings, this one
cannot be compensated for.

It just rules out any decision
option that earns such a rating
on at least one criterion,
no matter how well the option
scores on other criteria.

Therefore use it only when
'very negative' is not sufficient.

Fig. F.2b : rating scale

Basic diagram (decision matrix)

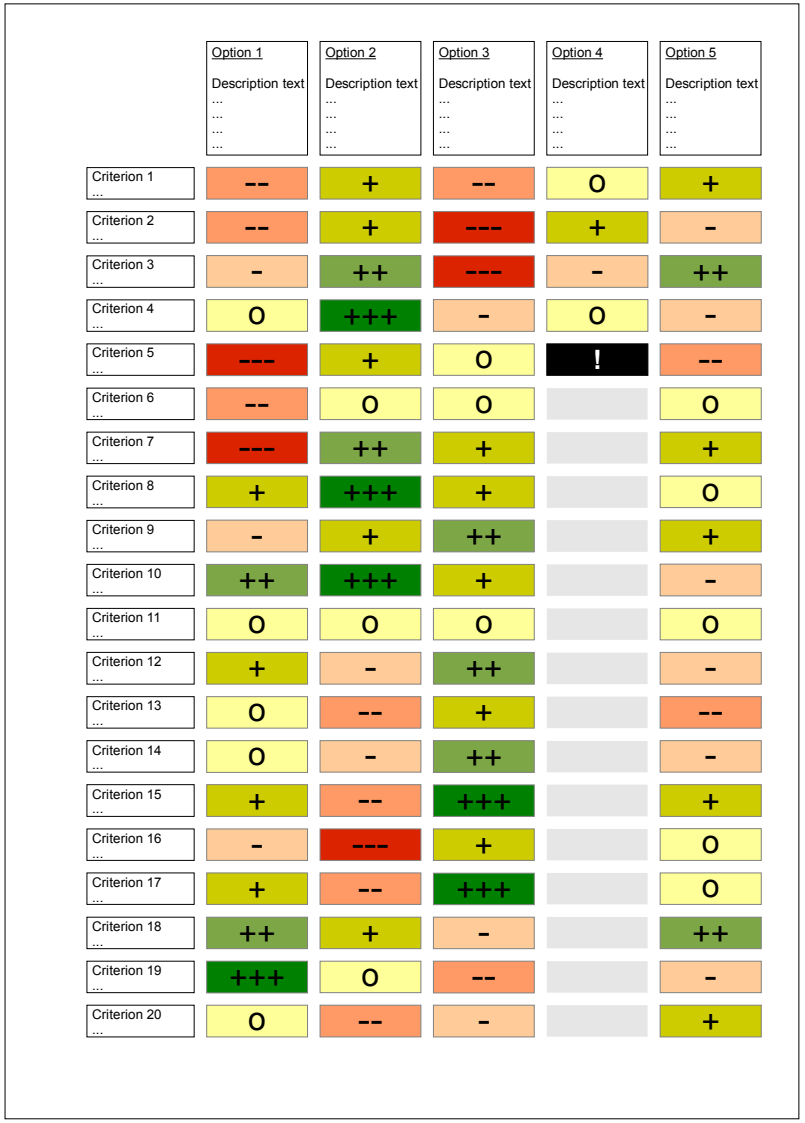
	Buy 'discount price' product A	Buy 'premium edition' product B
Purchase price	positive ++ (+2)	moderately negative - (-1)
Build quality	moderately negative - (-1)	positive ++ (+2)

Applying the scale to the example from p. 364 [12] gives us this result.

However, the benefits of using this rating scale become more obvious when dealing with more options and criteria.

Fig. F.1e : basic diagram (decision matrix)

Basic diagram (decision matrix)



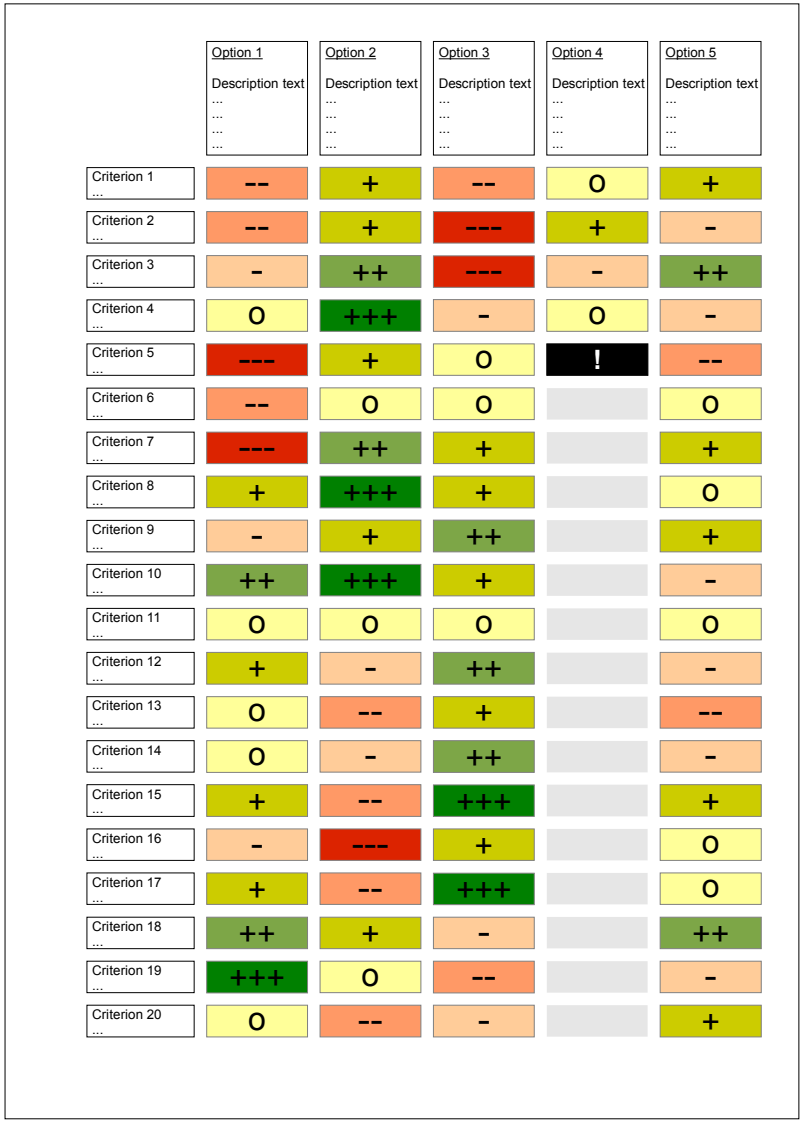
	Option 1 Description text	Option 2 Description text	Option 3 Description text	Option 4 Description text	Option 5 Description text ... ...
Criterion 1 ...	--	+	--	o	+
Criterion 2 ...	--	+	---	+	-
Criterion 3 ...	-	++	---	-	++
Criterion 4 ...	o	+++	-	o	-
Criterion 5 ...	---	+	o	!	--
Criterion 6 ...	--	o	o		o
Criterion 7 ...	---	++	+		+
Criterion 8 ...	+	+++	+		o
Criterion 9 ...	-	+	++		+
Criterion 10 ...	++	+++	+		-
Criterion 11 ...	o	o	o		o
Criterion 12 ...	+	-	++		-
Criterion 13 ...	o	--	+		--
Criterion 14 ...	o	-	++		-
Criterion 15 ...	+	--	+++		+
Criterion 16 ...	-	---	+		o
Criterion 17 ...	+	--	+++		o
Criterion 18 ...	++	+	-		++
Criterion 19 ...	+++	o	--		-
Criterion 20 ...	o	--	-		+

For instance, you could compare 5 options on 20 criteria, and yet easily maintain overview over all their advantages and disadvantages.

This is something you simply could not do without a diagram.

Fig. F.3a : basic diagram (decision matrix)

Basic diagram (decision matrix)



	Option 1 Description text	Option 2 Description text	Option 3 Description text	Option 4 Description text	Option 5 Description text ... ...
Criterion 1 ...	--	+	--	o	+
Criterion 2 ...	--	+	---	+	-
Criterion 3 ...	-	++	---	-	++
Criterion 4 ...	o	+++	-	o	-
Criterion 5 ...	---	+	o	!	--
Criterion 6 ...	--	o	o		o
Criterion 7 ...	---	++	+		+
Criterion 8 ...	+	+++	+		o
Criterion 9 ...	-	+	++		+
Criterion 10 ...	++	+++	+		-
Criterion 11 ...	o	o	o		o
Criterion 12 ...	+	-	++		-
Criterion 13 ...	o	--	+		--
Criterion 14 ...	o	-	++		-
Criterion 15 ...	+	--	+++		+
Criterion 16 ...	-	---	+		o
Criterion 17 ...	+	--	+++		o
Criterion 18 ...	++	+	-		++
Criterion 19 ...	+++	o	--		-
Criterion 20 ...	o	--	-		+

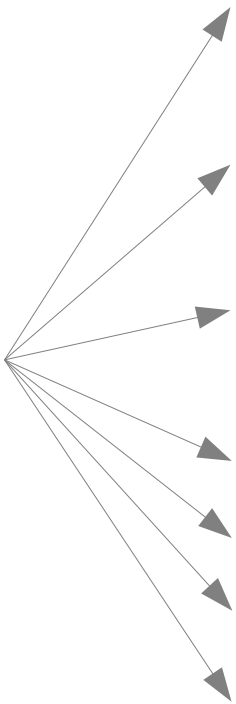
This matrix fits on a single A4/Letter-sized page, using a 10 pt font (a typical newspaper font is 8-9 pt).

Note that it was not necessary to evaluate option 4 any further after it was judged 'not acceptable' on one criterion.

Fig. F.3b : basic diagram (decision matrix)

Basic diagram (decision matrix)

Categories



		Option 1 Description text	Option 2 Description text	Option 3 Description text	Option 4 Description text	Option 5 Description text
Category 1	Criterion 1	--	+	--	o	+
	Criterion 2	--	+	---	+	-
	Criterion 3	-	++	---	-	++
	Criterion 4	o	+++	-	o	-
Category 2	Criterion 5	---	+	o	!	--
	Criterion 6	--	o	o		o
	Criterion 7	---	++	+		+
	Criterion 8	+	+++	+		o
Category 3	Criterion 9	-	+	++		+
	Criterion 10	++	+++	+		-
	Criterion 11	o	o	o		o
	Criterion 12	+	-	++		-
Category 4	Criterion 13	o	--	+		--
	Criterion 14	o	-	++		-
Category 5	Criterion 15	+	--	+++		+
	Criterion 16	-	---	+		o
Category 6	Criterion 17	+	--	+++		o
	Criterion 18	++	+	-		++
Category 7	Criterion 19	+++	o	--		-
	Criterion 20	o	--	-		+

When dealing with many criteria (or options), it is usually helpful to group them by category.

Examples of criteria categories:
finance, workload, quality of life, ethics, environment, compliance, effectiveness, feasibility, short-term, long-term.

Fig. F.3c : basic diagram (decision matrix)

The diagrams shown are
easy to make, and
easy to explain to others.

They are the right choice if
simplicity is paramount
(and only then).

On the next pages,
we develop the decision matrix
concept further.

These diagrams can do things
the basic ones can't.

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When you work with your ratings, you will sometimes feel uncertain about how to rate an option/criterion combination.

This might happen because you do not have enough information to give a precise rating, or because you want your rating 'somewhere between' two rating levels.

With a little upgrade, a decision matrix diagram can handle such uncertainties.

This does not only make the rating work easier, it also adds very valuable information to the diagram.

Basic diagram (decision matrix)

	Buy 'discount price' product A	Buy 'premium edition' product B
Purchase price	positive ++ (+2)	moderately negative - (-1)
Build quality	moderately negative - (-1)	positive ++ (+2)

We have seen this example before.

But now let's change the layout of the rating cells ...

Uncertainty handling

... to this format.

There is made room for a whole rating scale in each cell.

The chosen ratings are marked on the scale.

But it is now possible to mark more than one rating level.

Fig. F.4a : uncertainty handling

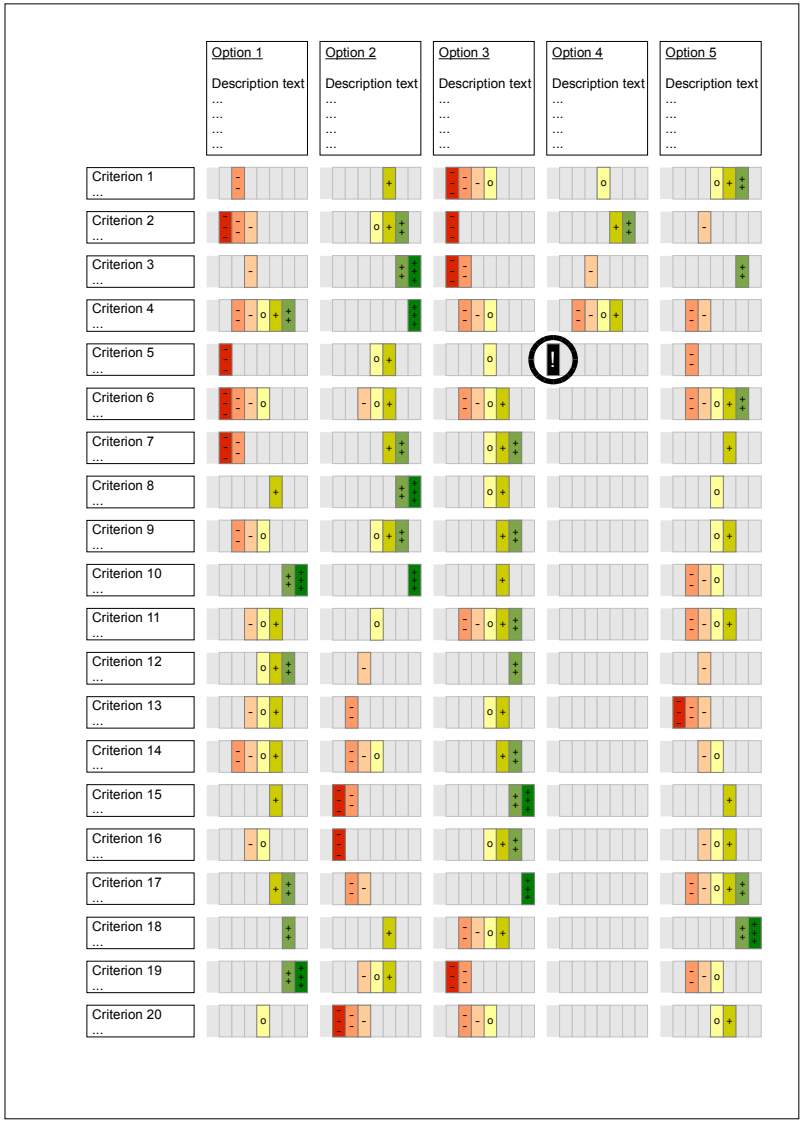
Uncertainty handling

In this example,
you are certain in your judgement of the purchase price, but uncertain about the build quality.

Product A's build quality appears more uncertain (and worse) than product B's.

Fig. F.4b : uncertainty handling

Uncertainty handling



A full A4/Letter page example could look like this.

(It's an upgraded version of the p. 369 [17] diagram.)

Fig. F.4c : uncertainty handling

A natural consequence
of uncertainty are
'worst case' / 'best case'
scenarios.

More about this later
in the 'scoring' section.

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The previous diagrams
were designed for a single
decision maker.

But often there are more decision
makers (and/or advisors) involved.

They will agree on some matters,
and disagree on others.

Making all views clearly visible
is in the interest of transparency
and good decision making.

The upcoming
'multi-party decision matrix'
is designed to do that.

Uncertainty handling

Back to our example.

Let's say the shown ratings are Alice's.

But now she wants to see other opinions ...

Fig. F.4d : uncertainty handling

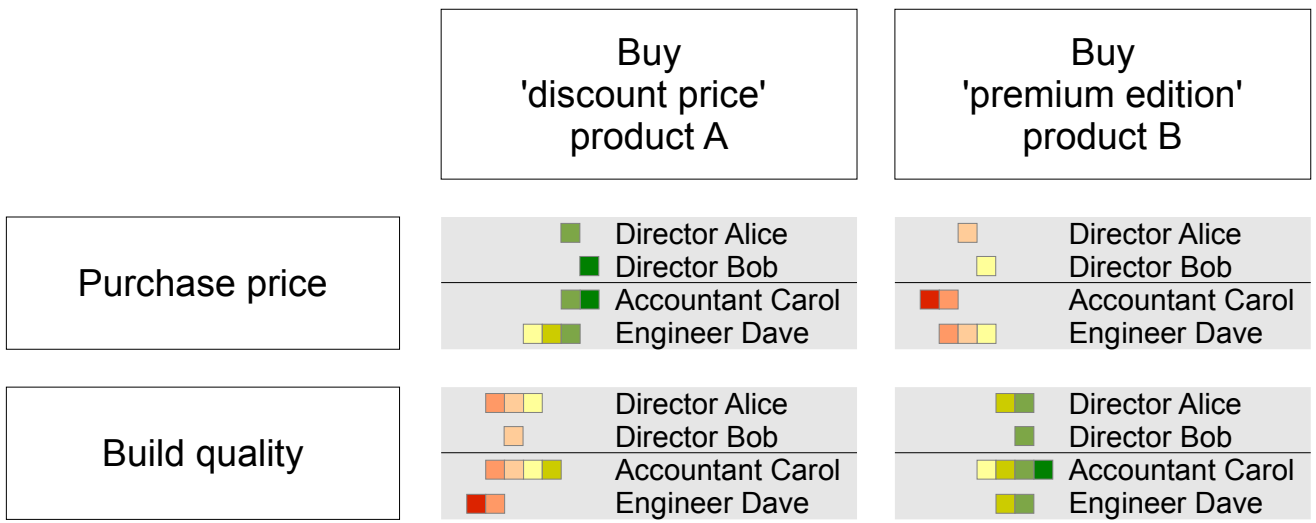
Multi-party capability

... so we change the layout of the rating cells once more.

Alice's ratings are still there, but now there is room for more.

Fig. F.5a : multi-party capability

Multi-party capability

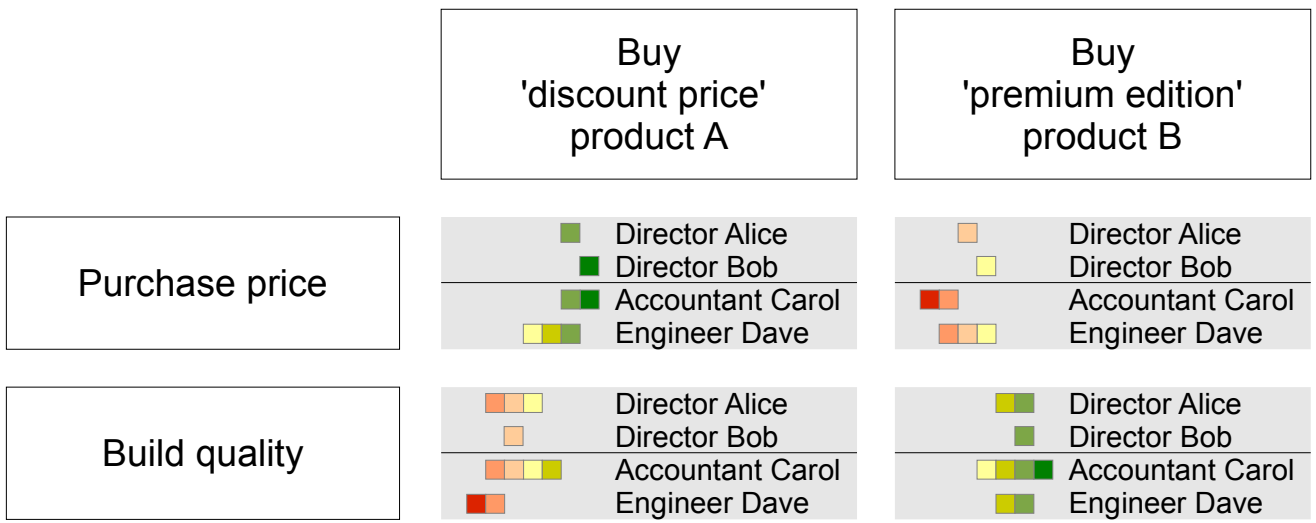


3 other parties were asked for their views, and the diagram shows these.

Hence the (maybe awkward but descriptive) term **multi-party decision matrix** for this kind of diagram.

Fig. F.5b : multi-party capability

Multi-party capability



Note the black lines separating the decision makers from the advisors.

Please take a moment to examine the ratings.

Fig. F.5c : multi-party capability

Multi-party capability

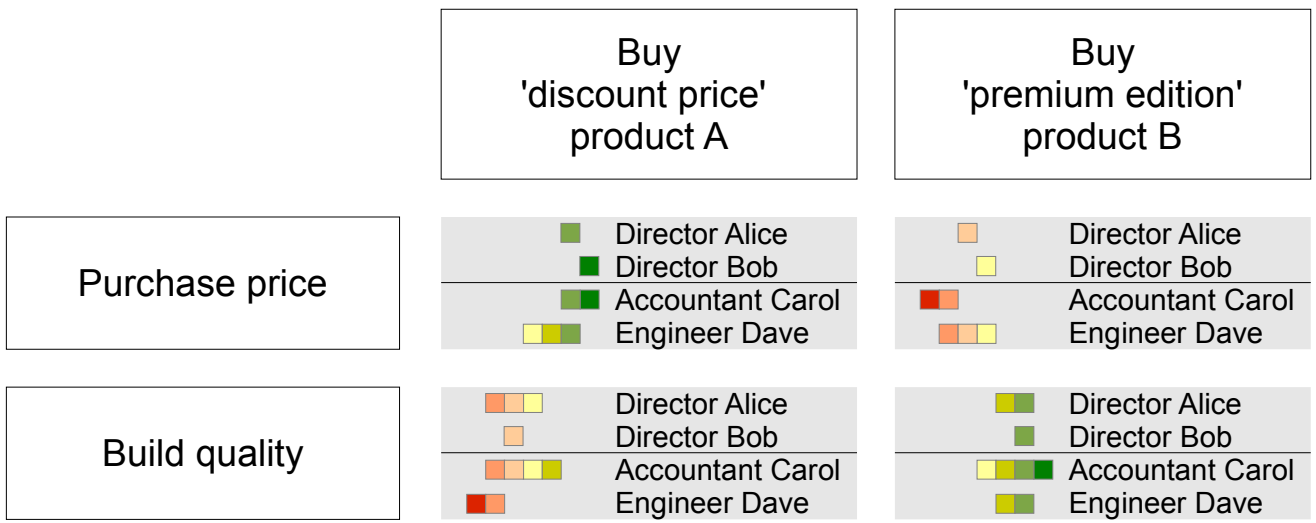
You will notice
(for instance) that:

- there are no major disagreements, except the marked one

- nobody uses a 'not acceptable' rating

Fig. F.5d : multi-party capability

Multi-party capability

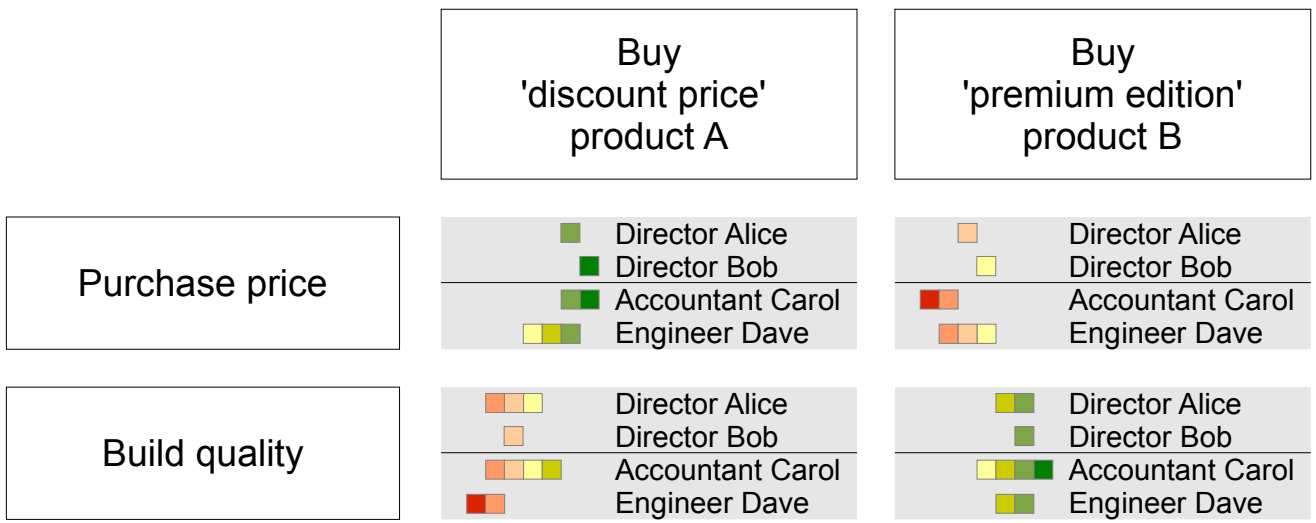


- Bob is certain about everything

(does he have more information? Or more self-confidence?)

Fig. F.5e : multi-party capability

Multi-party capability

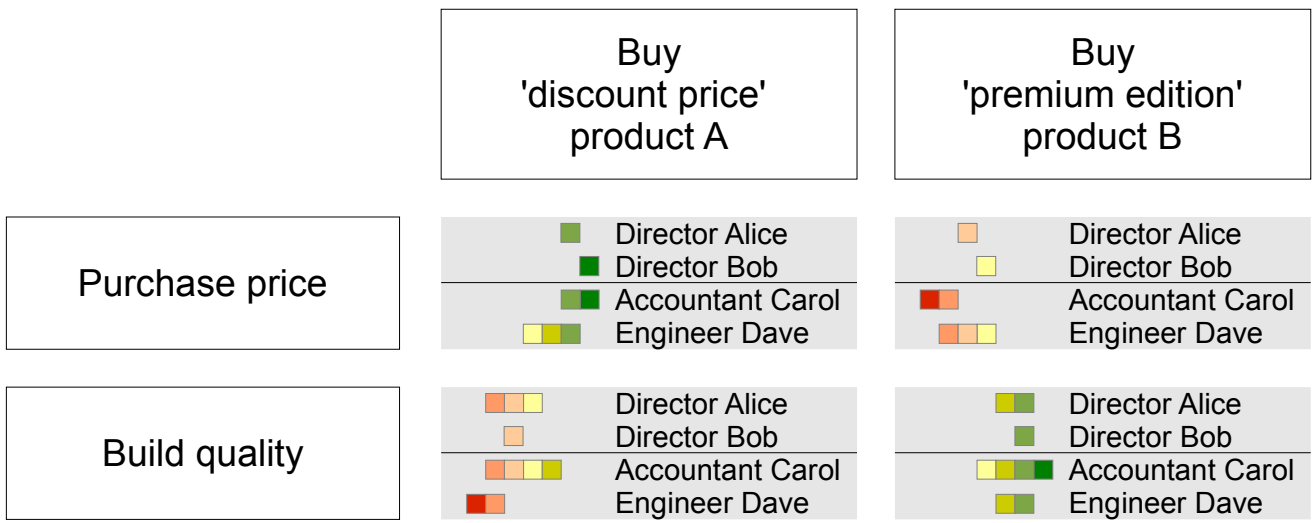


- Carol has no strong opinion about build quality

(that is good judgement if she's no expert)

Fig. F.5f : multi-party capability

Multi-party capability



- Dave really doesn't like product A's build quality

(which should get the decision makers' attention, because he is their expert for that)

Fig. F.5g : multi-party capability

Some notes
regarding practical aspects:

- of course you can put more than 4 parties' ratings in each cell (up to 10: no problem, more than 15: think twice)

- making such diagrams takes time. But far less time than having several parties writing their own reports. You can skip the report writing if you use a diagram (no need for both)

- let each party do their ratings independently. They should not see each other's ratings until these are complete

- if you don't want to make diagrams yourself, you could delegate this task to someone (trustworthy, willing and competent) else

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'Calculating a numerical score
for each decision option
often helps to find the best option.'

Is that true?

Not quite. Looking at a
single score (per option) can be
very misleading. Because single
scores imply that all options
come without (or with the same)
uncertainty or risk attached. And
that is usually wrong.

Therefore, at least 2 scores
(per option) are required:
one for the 'worst case',
one for the 'best case' ratings.

A 3rd score for 'average' is
nice to have.

These 3 scores combined often
do help to find the best option.

Scoring

According to Alice, the worst case score for this option is 0.0

Purchase price: +2 (■)
Build quality: -2 (■)

0

0 divided by 2 criteria = 0.0

Fig. F.6a : scoring

Scoring

According to Alice, the best case score for this option is 1.0

Purchase price: +2 (■)
Build quality: 0 (□)

2

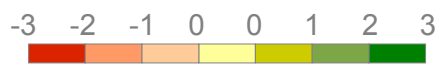
2 divided by 2 criteria = 1.0

Fig. F.6b : scoring

Scoring

The average of her worst/best case scores is 0.5

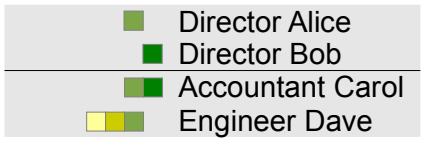
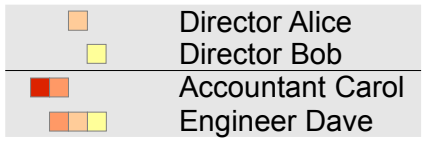
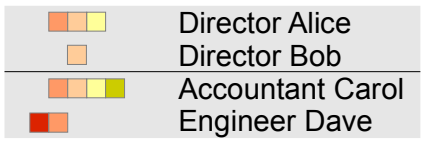
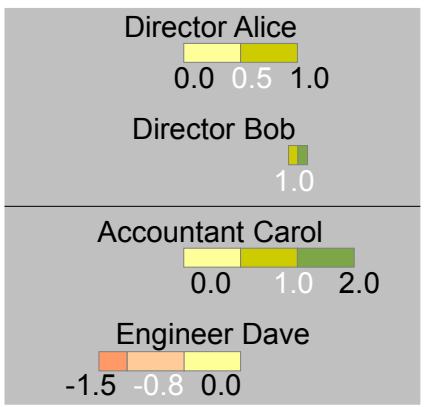
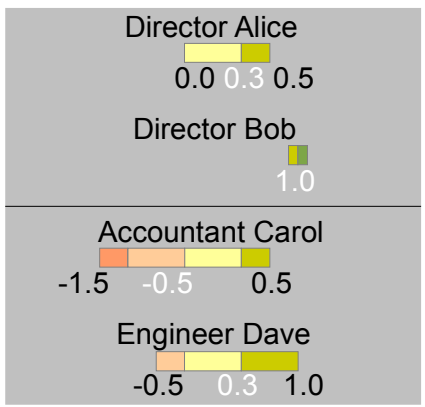
These numbers are mapped to a graphical scale:



(where 0 is exaggerated)

Fig. F.6c : scoring

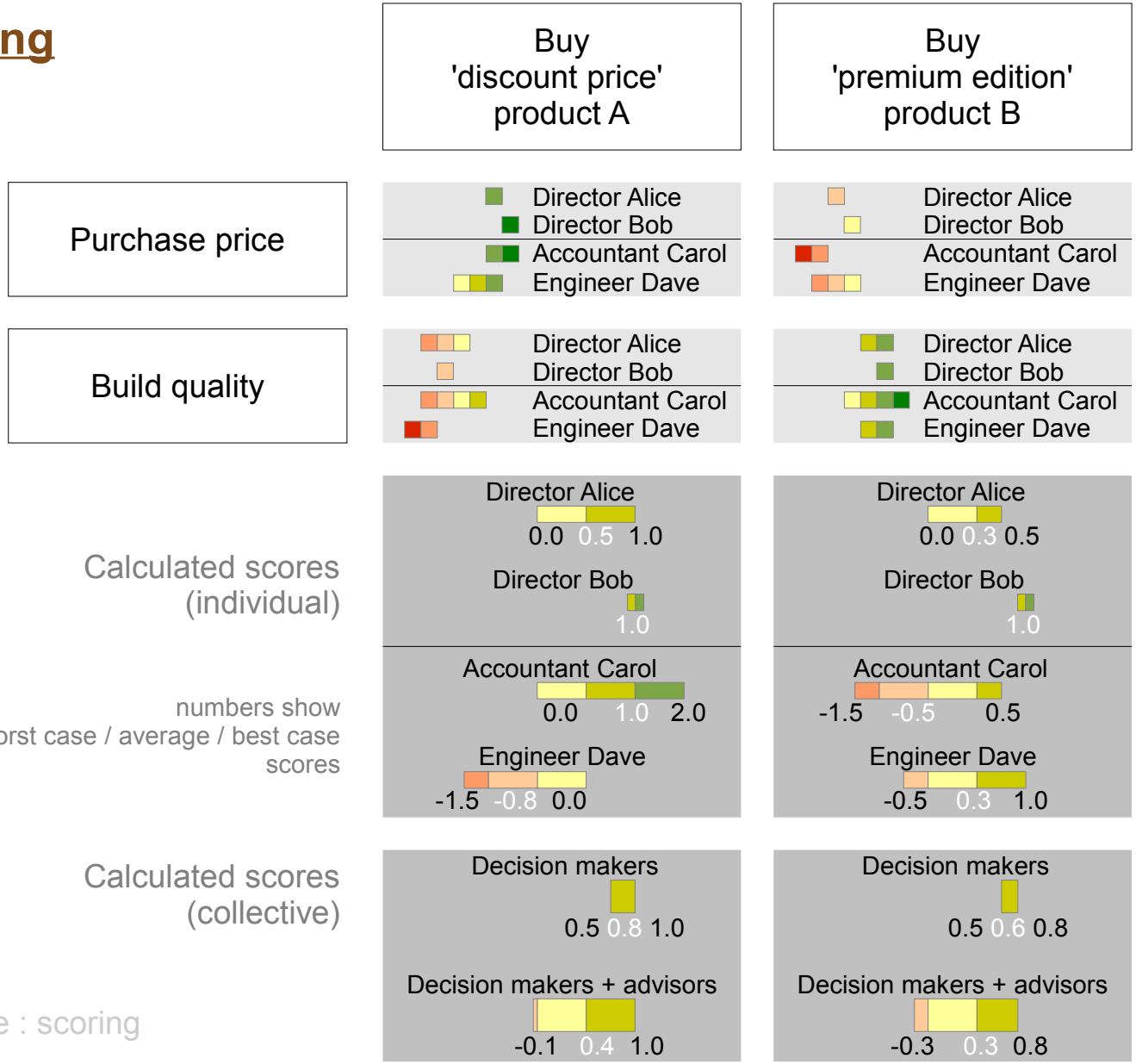
Scoring

	Buy 'discount price' product A	Buy 'premium edition' product B
Purchase price		
Build quality		
Calculated scores (individual) numbers show worst case / average / best case scores		

This is how it looks after processing all ratings.

Fig. F.6d : scoring

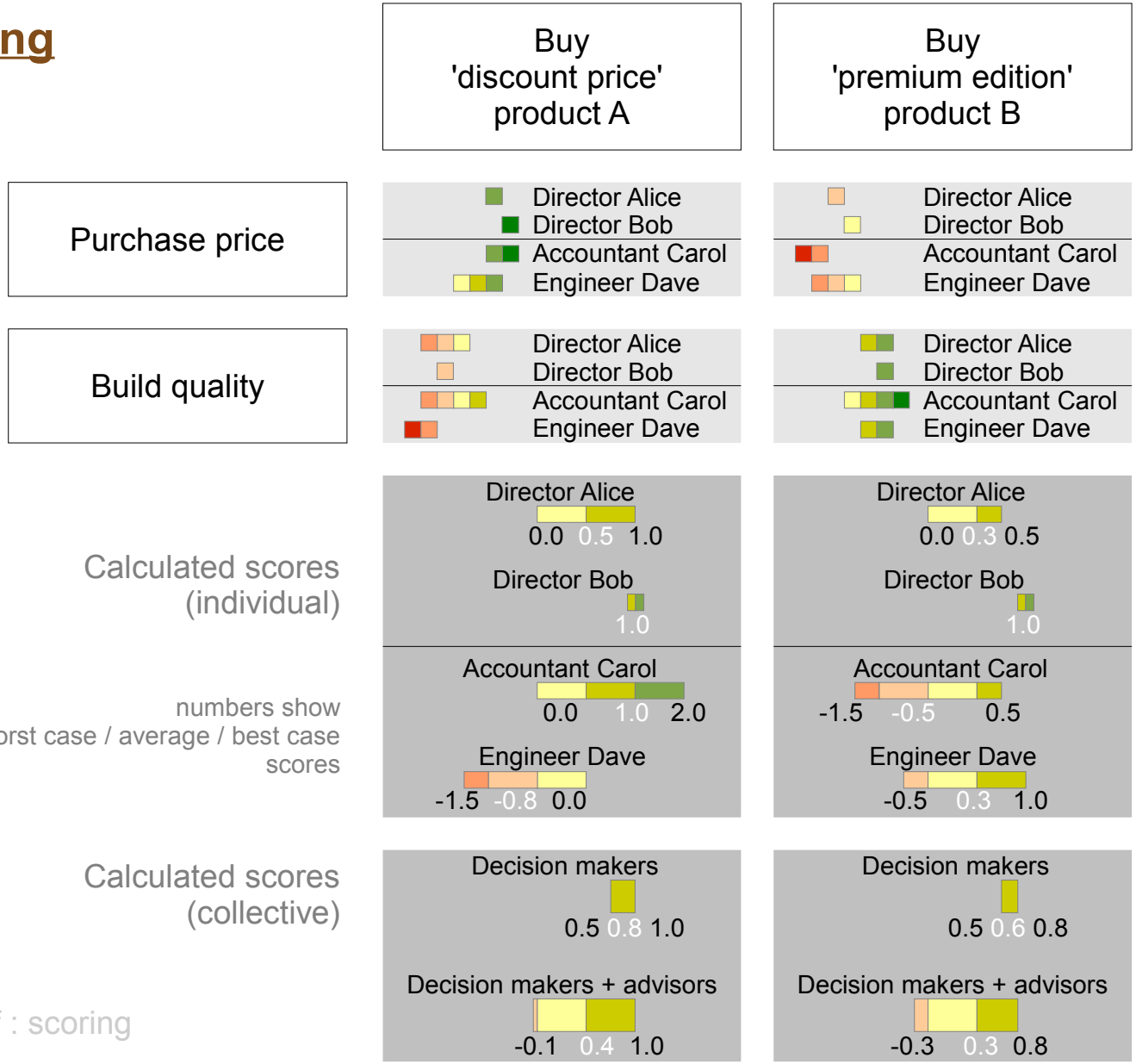
Scoring



Finally,
the individual scores
are merged (averaged)
into collective scores.

Fig. F.6e : scoring

Scoring



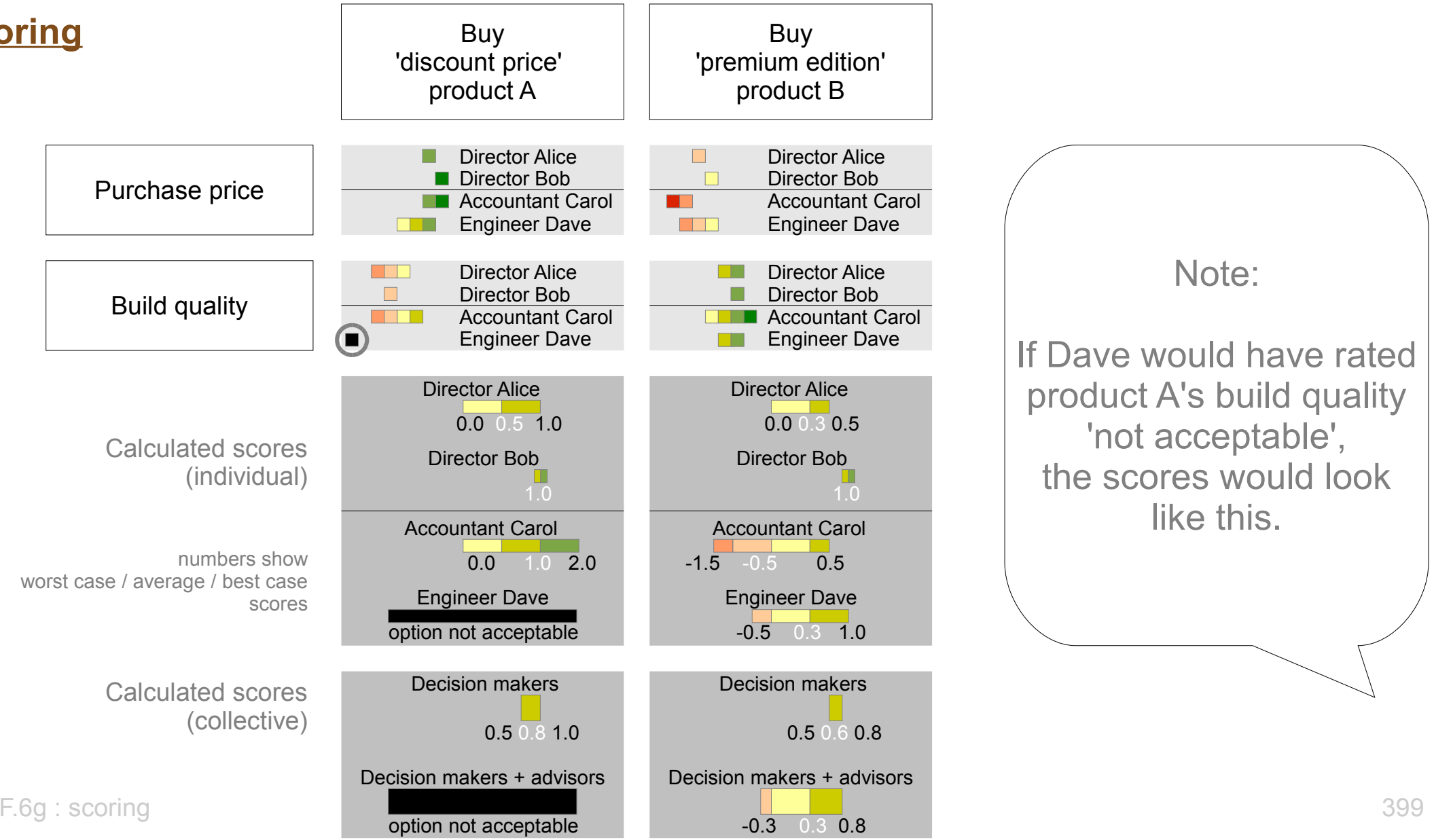
The collective scores tell us mainly that:

- the product A option has a slight advantage, both in worst and best case scores

- both options are acceptable

Fig. F.6f : scoring

Scoring

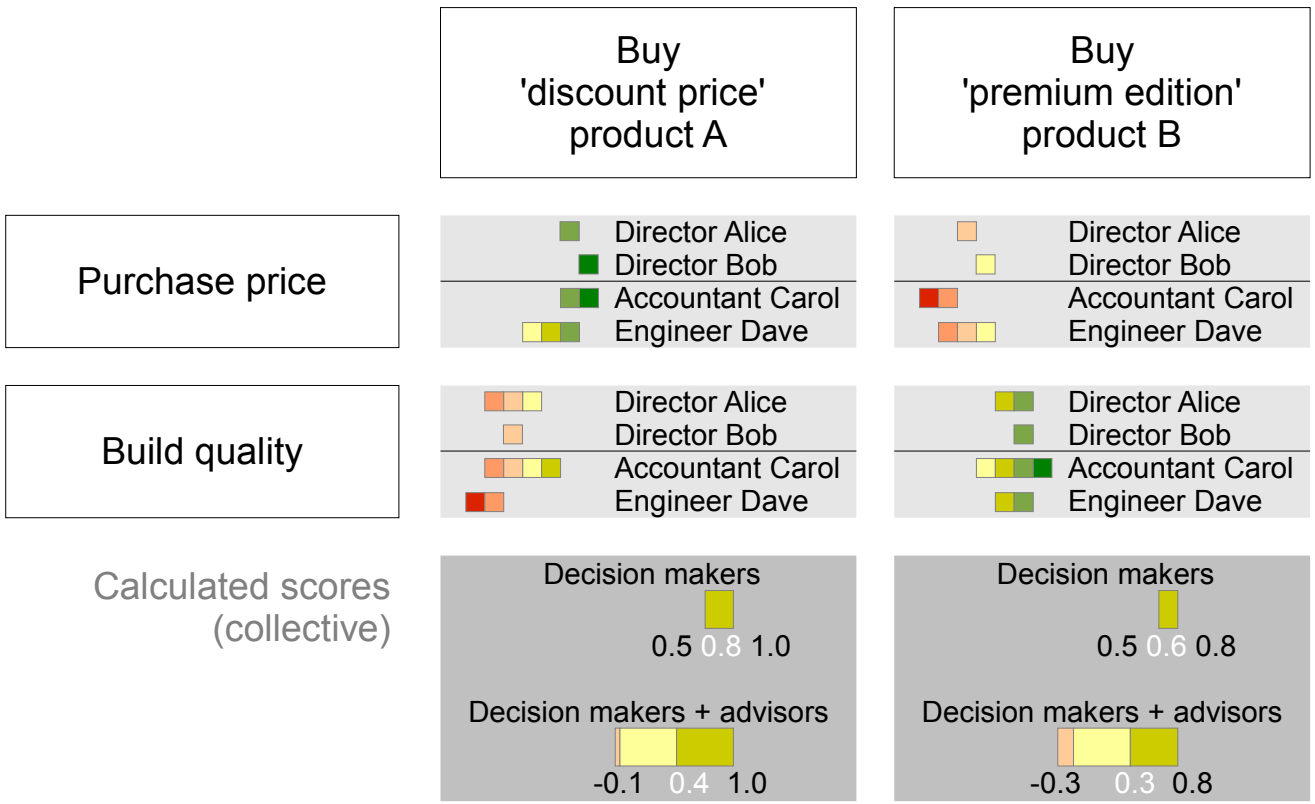


Note:

If Dave would have rated product A's build quality 'not acceptable', the scores would look like this.

Fig. F.6g : scoring

Scoring



When presenting such a matrix to an inexperienced audience, consider to:

- first show (explain) the matrix without scores

- then show it with added collective scores (example to the left)

- then show the individual scores

Fig. F.6h : scoring

Would you prefer to buy product B, despite its slightly worse scores?

In that case, your judgement may partly be based on criteria not included in the example (e.g. 'total cost of ownership' or 'user experience').

Or perhaps the 'build quality' criterion is more important for you than the 'purchase price' criterion.

This leads us to the next section.

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Often some criteria appear as more, some as less important than others.

Their perceived importance depends on how well they align with the observer's value system.

This implies that only people with similar value systems tend to agree on what is 'important'.

A decision support tool, e.g. a multi-party decision matrix, should allow (not force) each party to attach individual 'weights' to each criterion.

There are 3 different ways of doing this.

1. criteria selection

Example: if you have 5 criteria in the 'finance' category and 2 in 'environment', 'finance' weighs much more than 'environment'.

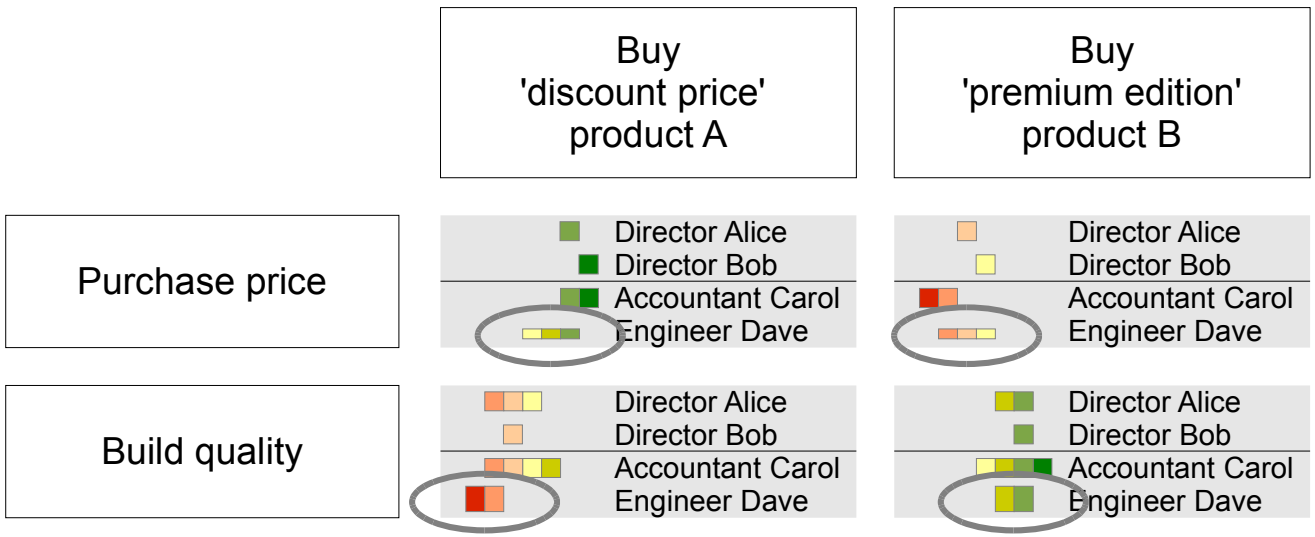
2. judgement (rating) bias

Example: 'build quality' is very important for Dave. Hence he judges this criterion very critically, and expresses that in his ratings.

3. numerical weights

A numerical weight is a factor applied to a criterion score, to make it count more/less in the total score.

Numerical/visual weights



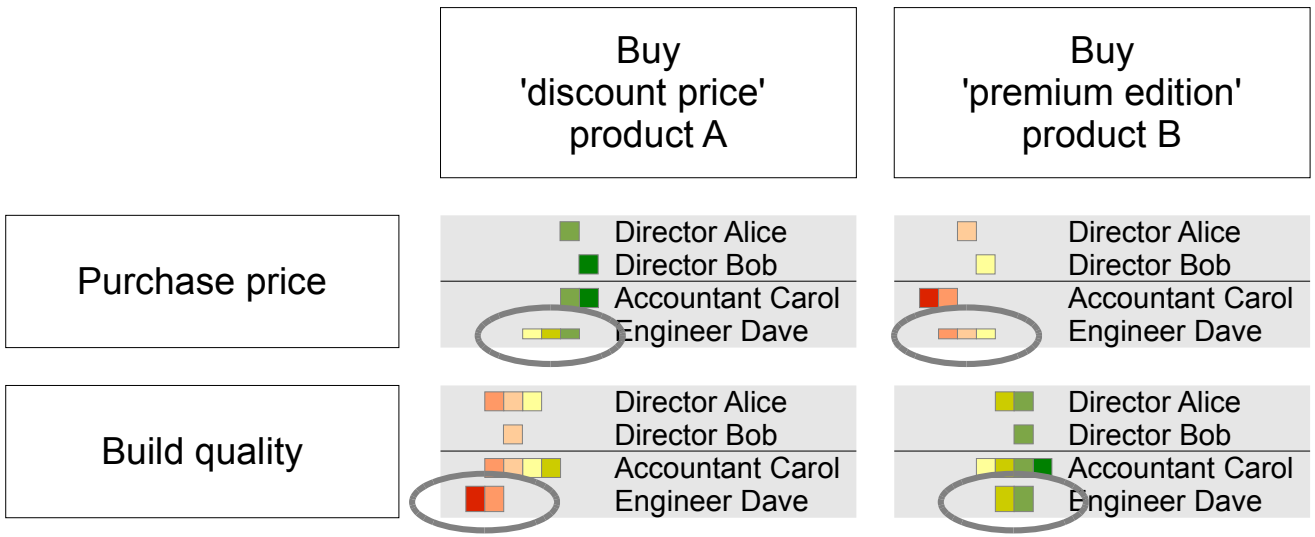
With only one party (Dave) using numerical weights, the diagram looks like this.

Numerical weight and visual block height are proportional.

Even without ever talking to Dave, you can directly see what he finds important.

Fig. F.7a : numerical/visual weights

Numerical/visual weights



Dave weighted 'build quality' up, from default 100% to 150%.

He also weighted 'purchase price' down, from 100% to 50%.

For simplicity, only these weights are allowed:

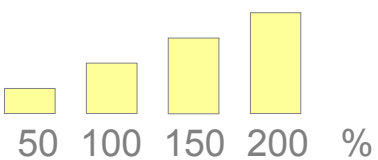


Fig. F.7b : numerical/visual weights

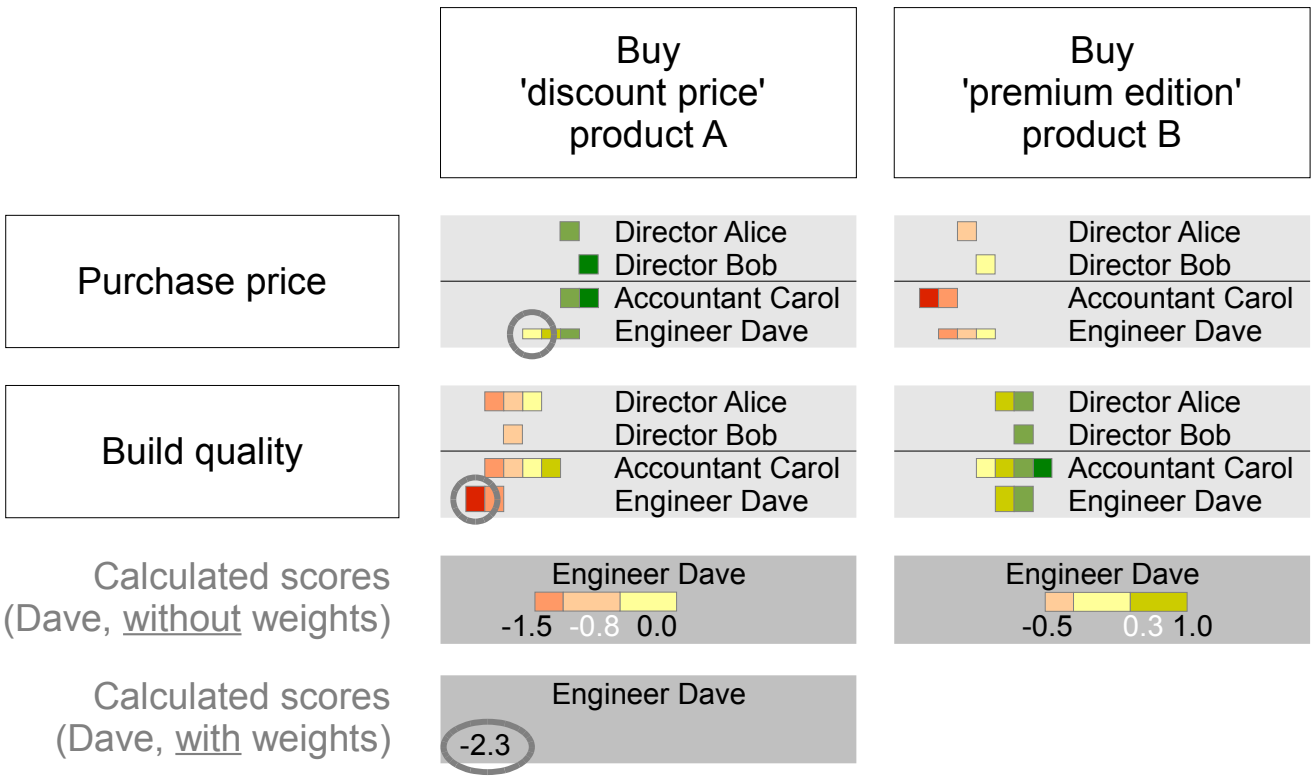
Numerical/visual weights

As a rule, weight can only be shifted between criteria (instead of just added). For instance, a party 'giving' extra 100% to one criterion must 'take' 2x 50% from other criteria.

(Otherwise score calculations become meaningless.)

Fig. F.7c : numerical/visual weights

Numerical/visual weights



Dave's new worst case score for the product A option is -2.3

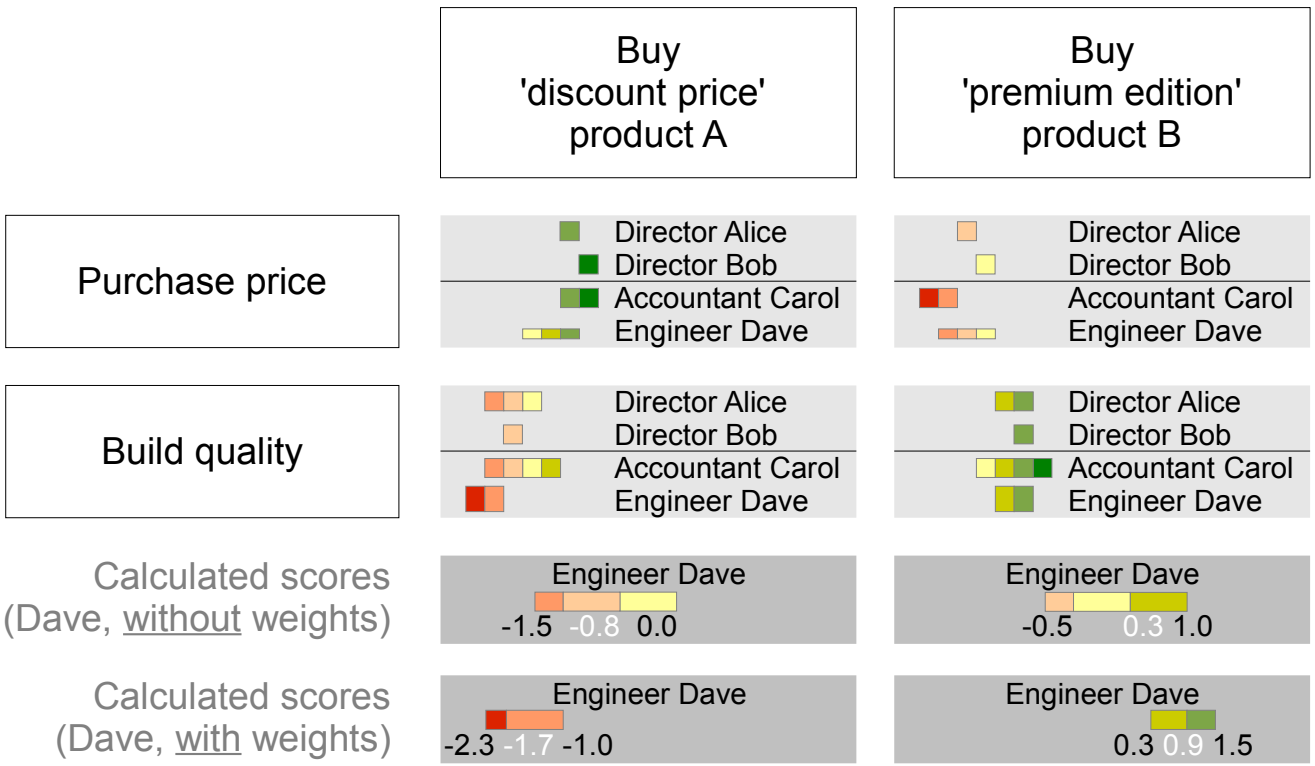
Purchase price: 0 x 0.5 (▭) = 0.0
Build quality: -3 x 1.5 (■) = -4.5

-4.5

-4.5 divided by 2 criteria = -2.25
(-2.3)

Fig. F.7d : numerical/visual weights

Numerical/visual weights



Because of the shifted weight, 'build quality' dominates Dave's new scores very clearly.

With more criteria in the matrix, shifted weights have a less dramatic impact on scores.

Fig. F.7e : numerical/visual weights

Note:

All parties should complete their ratings before considering to shift weights between criteria.

For instance, if there is only one acceptable option left,
there is no need for weighting
(nor for scoring).

Progress

Intro	done
Why bother?	done
Basic diagram	done
Diagram upgrades : ...	
... uncertainty handling	done
... multi-party capability	done
... scoring	done
... weighted criteria	done
... two-step ratings	up next
Possible mistakes	
Summary	

Assuming that option set and criteria were chosen carefully, the final decision quality depends heavily on how accurate the ratings are.

Letting multiple parties do their ratings independently already reduces the impact of individual rating errors.

But there is another way to increase both rating accuracy and transparency.

The trick is to divide the rating evaluations into two steps.

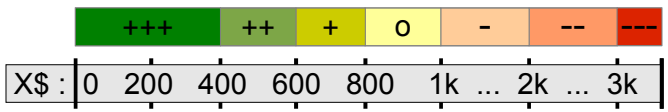
Example: single-step rating

'I give the purchase price of product A a positive (++) rating'

Note:
If I base my rating on a wrong purchase price, nobody else can see my error. This is both an accuracy and transparency issue.

Example: two-step rating

1. 'This is how I rate these purchase prices'



X$ (example $)

2. 'For product A, I expect a purchase price of 500 X$'

This results in a positive (++) rating.

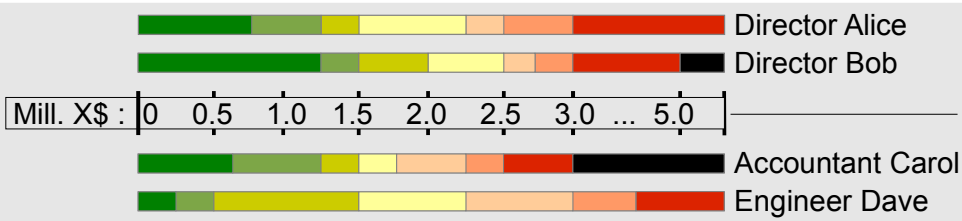
Single-step ratings are often less accurate, mostly because they are easily 'contaminated' by other criteria.

For instance, the decision maker may rate the same purchase price as positive (++) for a well built product, but as negative (--) for a poorly built product.

This is intuitive but wrong, because 'build quality' judgements belong to that criterion, not to the 'purchase price' criterion.

Two-step ratings make it easy to avoid this kind of confusion, and to spot wrong assumptions.

Two-step rating baselines (multi-party)

Purchase price	
Build quality	This criterion cannot be quantified (along one axis). Therefore ratings are performed directly (in the decision matrix).

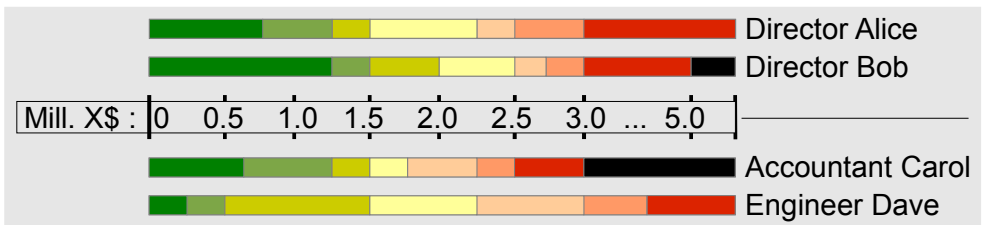
Back to our familiar example.

Alice and Bob are in charge of buying some expensive equipment, and go for two-step ratings.

They use a new diagram (shown on the left) for that. The criteria are the same as in the decision matrix.

Fig. F.8a : two-step ratings (multi-party)

Two-step rating baselines (multi-party)

Purchase price	
Build quality	This criterion cannot be quantified (along one axis). Therefore ratings are performed directly (in the decision matrix).

The 1. step is to establish baselines for how quantifiable facts translate into individual ratings.

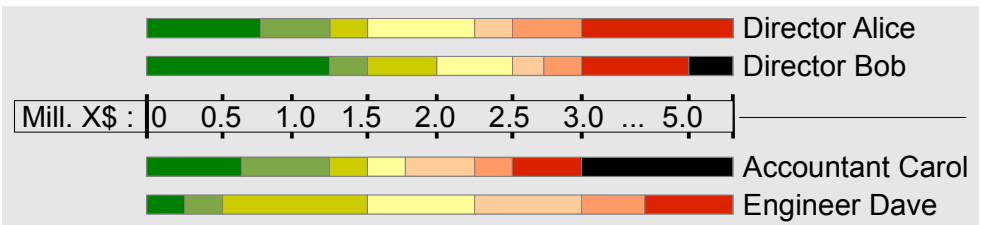
For instance, Carol rates any purchase price above 3m X$ as 'not acceptable'.

Note that not all criteria are quantifiable.

Fig. F.8b : two-step ratings (multi-party)

Merged diagrams

Two-step rating baselines



This criterion cannot be quantified (along one axis).

Therefore ratings are performed directly (in the decision matrix).

Decision matrix

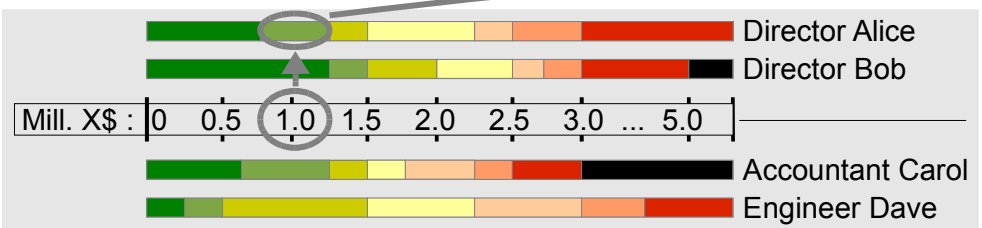
	Buy 'discount price' product A	Buy 'premium edition' product B
Purchase price	Director Alice Director Bob Accountant Carol Engineer Dave	Director Alice Director Bob Accountant Carol Engineer Dave
Build quality	Director Alice Director Bob Accountant Carol Engineer Dave	Director Alice Director Bob Accountant Carol Engineer Dave

Two-step rating baselines and decision matrix can be merged into a single diagram.

Fig. F.9a : merged diagrams

Merged diagrams

Two-step rating baselines



This criterion cannot be quantified (along one axis).

Therefore ratings are performed directly (in the decision matrix).

Decision matrix

	Buy 'discount price' product A	Buy 'premium edition' product B
Purchase price	Director Alice Director Bob Accountant Carol Engineer Dave	Director Alice Director Bob Accountant Carol Engineer Dave
Build quality	Director Alice Director Bob Accountant Carol Engineer Dave	Director Alice Director Bob Accountant Carol Engineer Dave

Now it becomes transparent on which numbers the individual ratings are based.

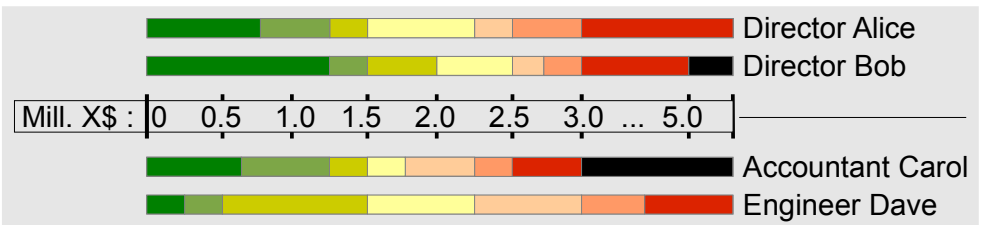
(Applies only to quantifiable criteria)

Example:

Alice expects (in her 2. rating step) a purchase price of about 1m X$ for product A.

Merged diagrams

Two-step rating baselines



This criterion cannot be quantified (along one axis).

Therefore ratings are performed directly (in the decision matrix).

And this is how it looks including collective scores

(scores updated after Dave applied weight factors to his ratings).

Decision matrix

	Buy 'discount price' product A	Buy 'premium edition' product B
Purchase price	Director Alice Director Bob Accountant Carol Engineer Dave	Director Alice Director Bob Accountant Carol Engineer Dave
Build quality	Director Alice Director Bob Accountant Carol Engineer Dave	Director Alice Director Bob Accountant Carol Engineer Dave
Calculated scores (collective)	Decision makers 0.5 0.8 1.0 Decision makers + advisors -0.3 0.2 0.8	Decision makers 0.5 0.6 0.8 Decision makers + advisors 0.0 0.4 0.9

Fig. F.9c : merged diagrams

Sometimes it's easier to keep the two-step rating baselines and the decision matrix as separate diagrams (instead of merging them).

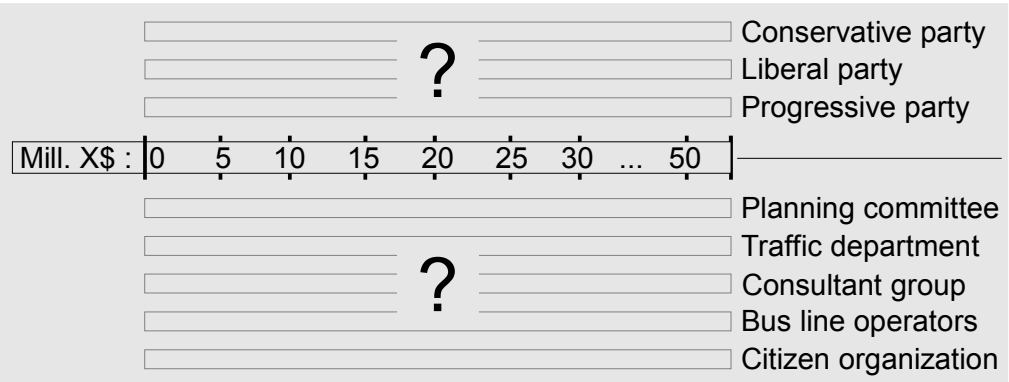
You can still view (or present) them side by side when wanted.

Two-step rating baselines (multi-party)

Total costs

of

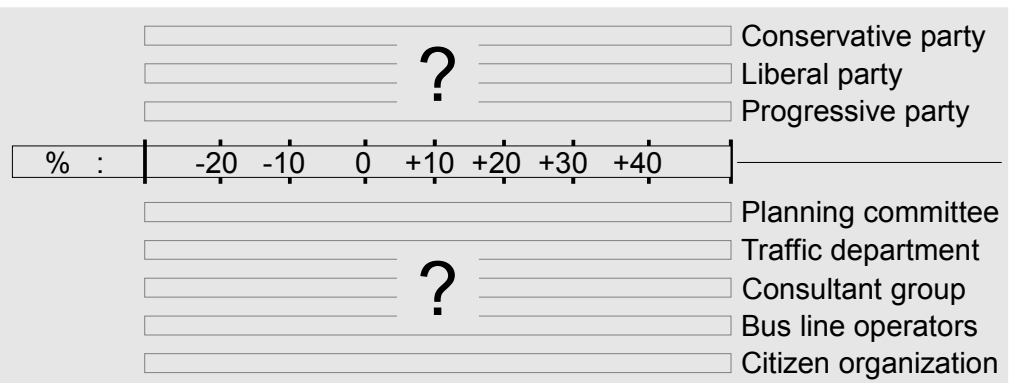
new Central Bus Station project



Change in passenger numbers

after

project is completed



The Alice-Bob-Carol-Dave-product-A/B example was very simple.

In real life, the 'products' could be new bus stations, schools, business plans, tax systems, or foreign policy strategies.

(Just a reminder regarding what this text is about.)

Fig. F.8c : two-step ratings (multi-party)

Progress

Intro	done
Why bother?	done
Basic diagram	done
Diagram upgrades : ...	
... uncertainty handling	done
... multi-party capability	done
... scoring	done
... weighted criteria	done
... two-step ratings	done
Possible mistakes	up next
Summary	

The discussed diagrams
are decision making tools.

Like many other tools,
they deliver good results
when handled properly.

Otherwise not.

So, what do you need
to watch out for?

Well, mistakes can occur in
all 4 areas of the decision matrix:

1. the options area
2. the criteria area
3. the ratings area
4. the scores area

1. Common mistakes in the options area

- not enough effort is made to find promising decision options.
No decision matrix can show the merits of overlooked options

- unclear or rhetorically biased option descriptions
(hinder accurate ratings)

2. Common mistakes in the criteria area

- important criteria are not included ('important' for at least one party)

- the criteria list is crowded with rather unimportant criteria
(10-30 criteria work well in most situations)

- unclear or rhetorically biased criteria descriptions
(hinder accurate ratings)

3. Common mistakes in the ratings area

- inconsistent ratings

- ratings based on wrong assumptions

(both discussed in the 'two-step ratings' section)

4. Common mistakes in the scores area

- calculation errors (yes, it happens)

- scores are not updated after a rating (or weighting) change

Note that some of these mistakes are related to decision making in general (with or without diagrams).

Certainly a major mistake would be to write/read tens/hundreds of text pages, and then to make a decision based on what you happen to remember, or on what was rhetorically most convincing.

Decisions affecting the public should be made according to a suitable quality standard, to prevent all these mistakes, and to ensure good decision quality.

(Quality standards for decision making are discussed in appendix E of the original book.)

Progress

Intro	done
Why bother?	done
Basic diagram	done
Diagram upgrades : ...	
... uncertainty handling	done
... multi-party capability	done
... scoring	done
... weighted criteria	done
... two-step ratings	done
Possible mistakes	done
Summary	up next

Summary

You cannot make well-founded and good decisions without overview.

In complex situations, overview requires diagrams.

A 'multi-party decision matrix' is a diagram specifically designed for that purpose.

Whether 2 or 10 decision makers, new office furniture or new foreign policy: this diagram reveals which decision options are better than others, and why.

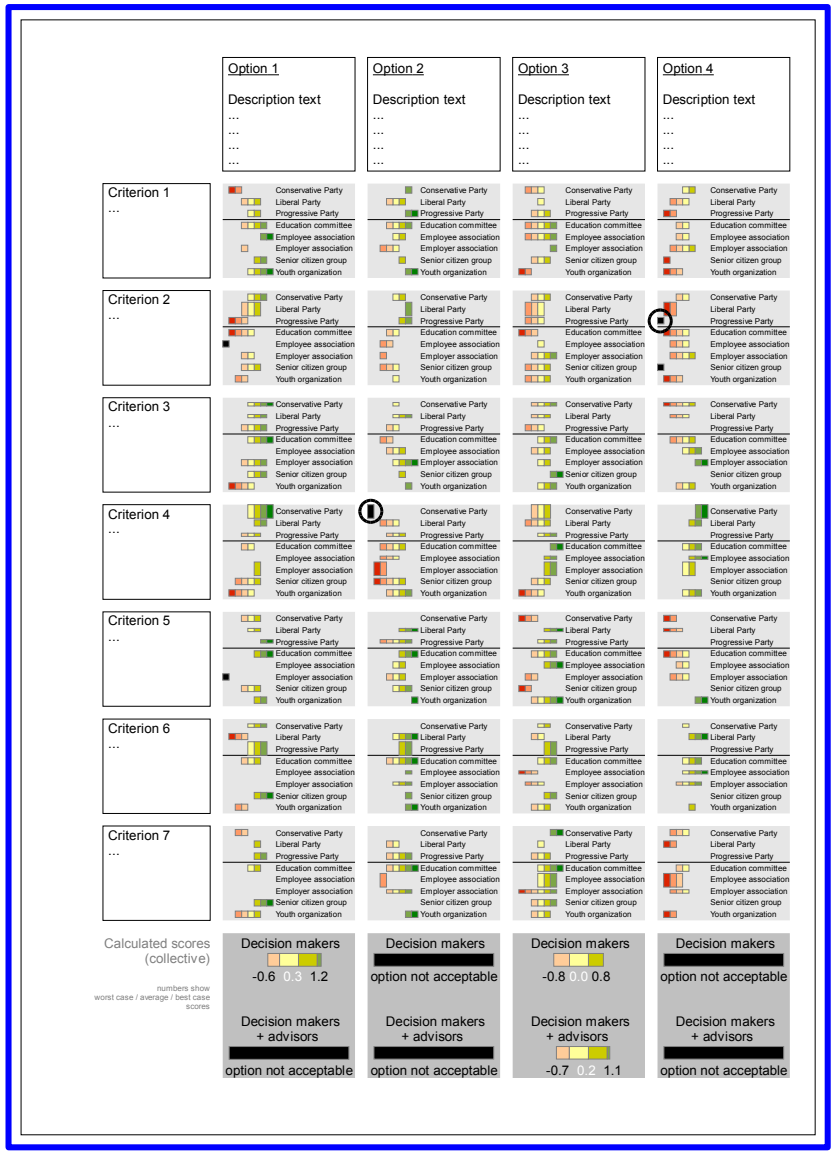
In addition, it speeds up the decision making process by replacing a lot of (report writing) paperwork.

Because of its clear and logical structure, it can be explained to most audiences in about 1 minute.

1 minute summary

(multi-party decision matrix)

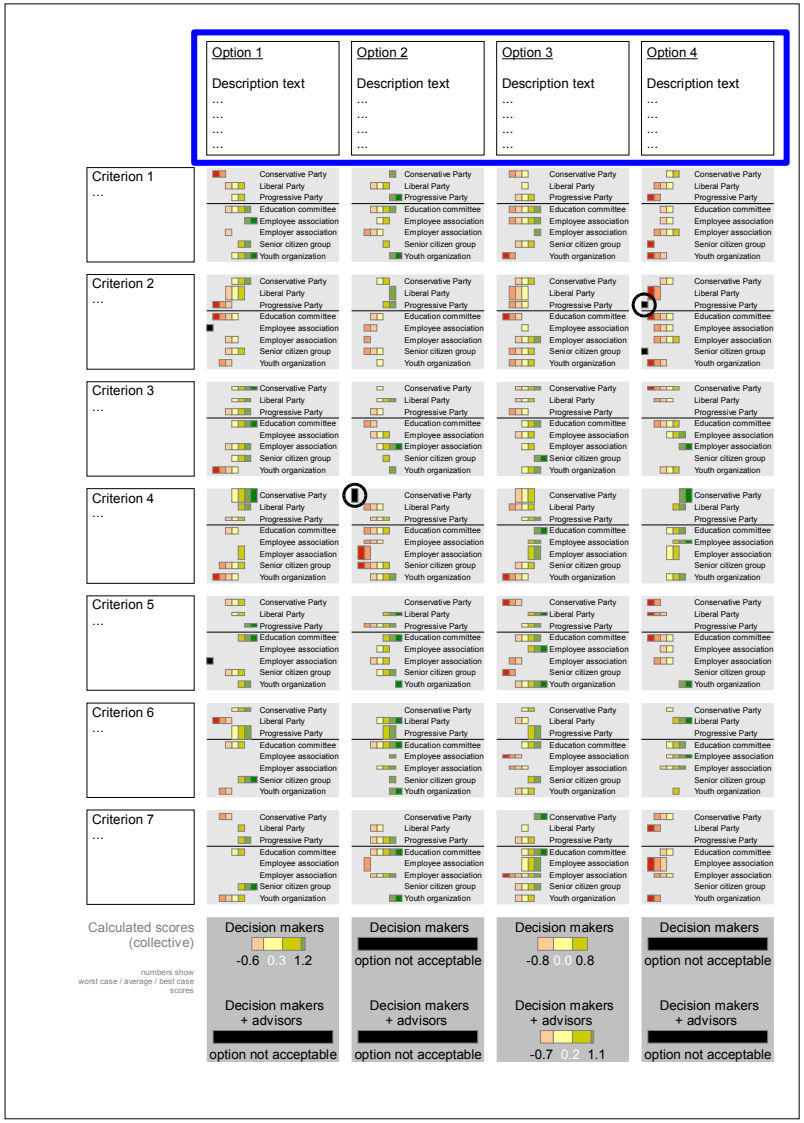
This is an A4/Letter-sized page. It shows a multi-party decision matrix example. Such diagrams are decision support tools.



1 minute summary

(multi-party decision matrix)

This is an A4/Letter-sized page. It shows a multi-party decision matrix example. Such diagrams are decision support tools.



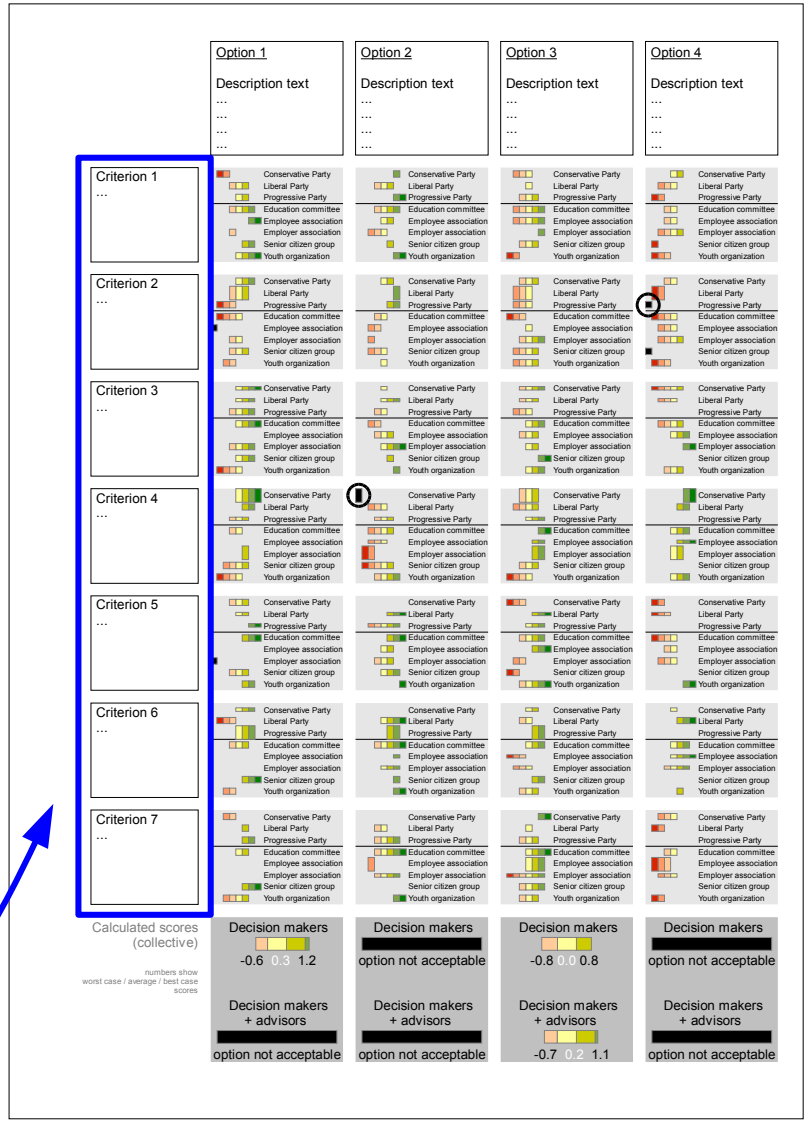
The considered decision options (choices) are listed here.

1 minute summary

(multi-party decision matrix)

This is an A4/Letter-sized page. It shows a multi-party decision matrix example. Such diagrams are decision support tools.

The considered decision criteria are listed here.



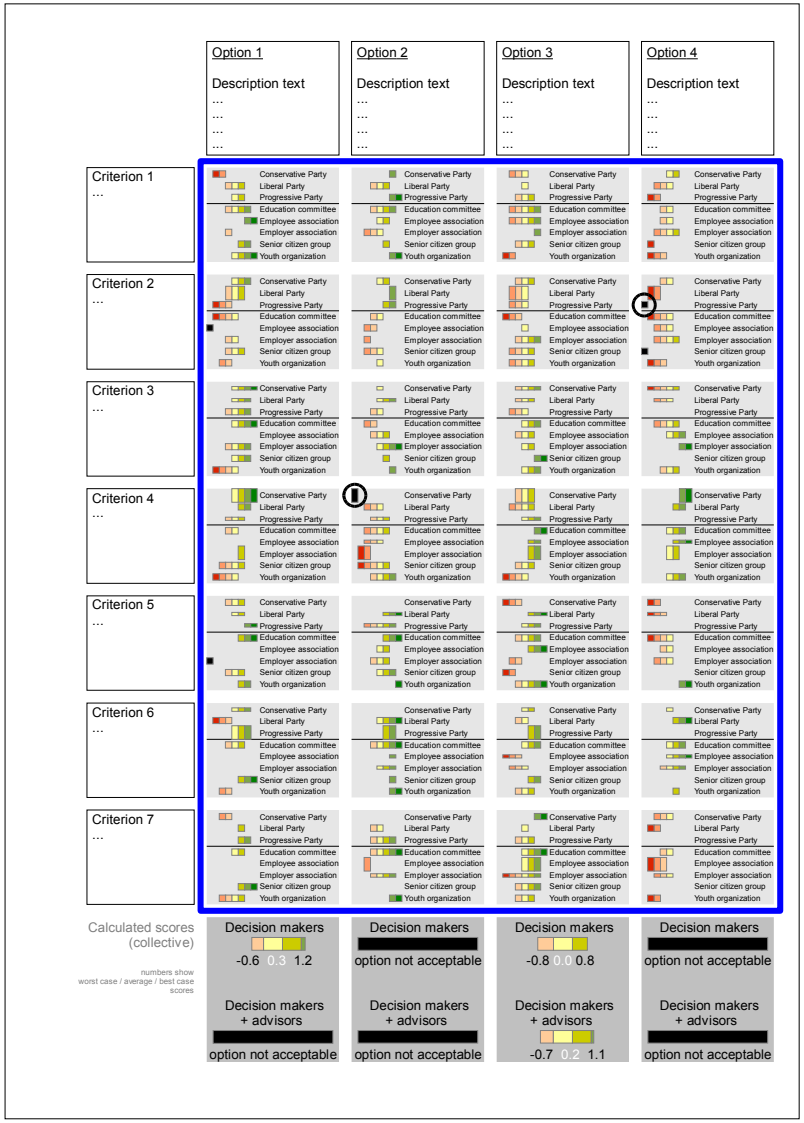
The considered decision options (choices) are listed here.

1 minute summary

(multi-party decision matrix)

This is an A4/Letter-sized page. It shows a multi-party decision matrix example. Such diagrams are decision support tools.

The considered decision criteria are listed here.



The considered decision options (choices) are listed here.

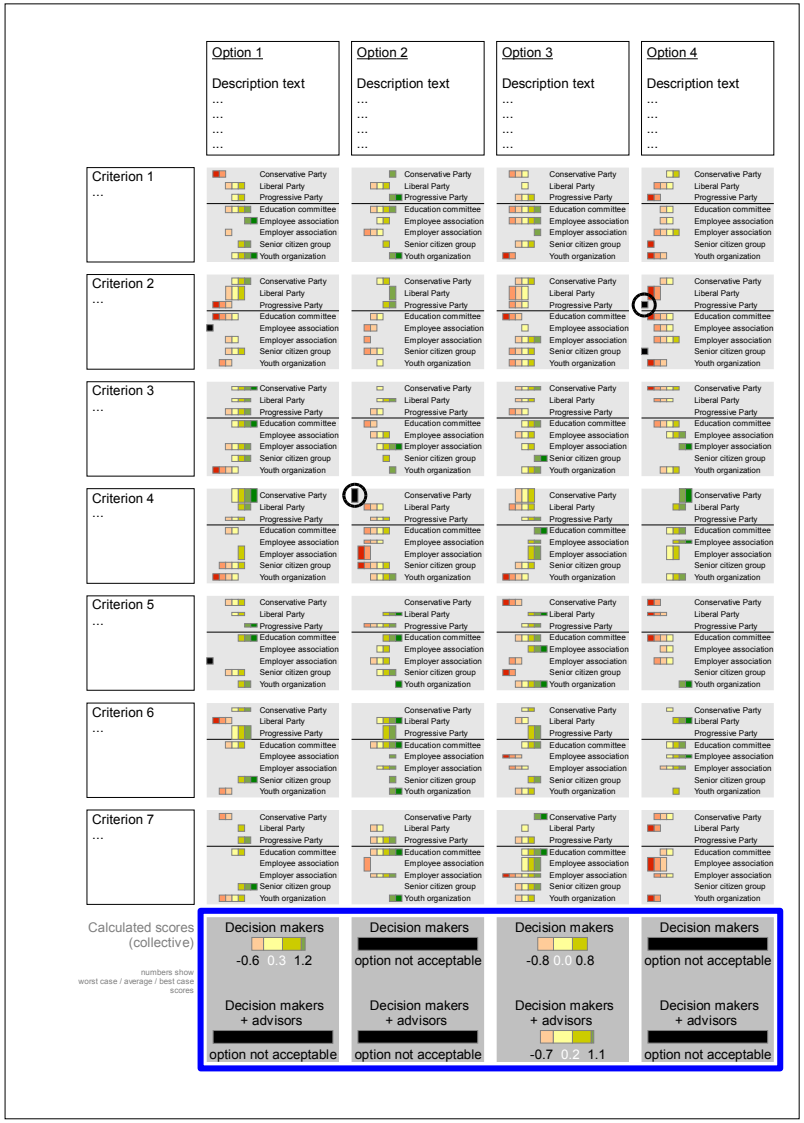
The decision makers and their advisors rate (evaluate) the option/criterion combinations here.

1 minute summary

(multi-party decision matrix)

This is an A4/Letter-sized page. It shows a multi-party decision matrix example. Such diagrams are decision support tools.

The considered decision criteria are listed here.



The considered decision options (choices) are listed here.

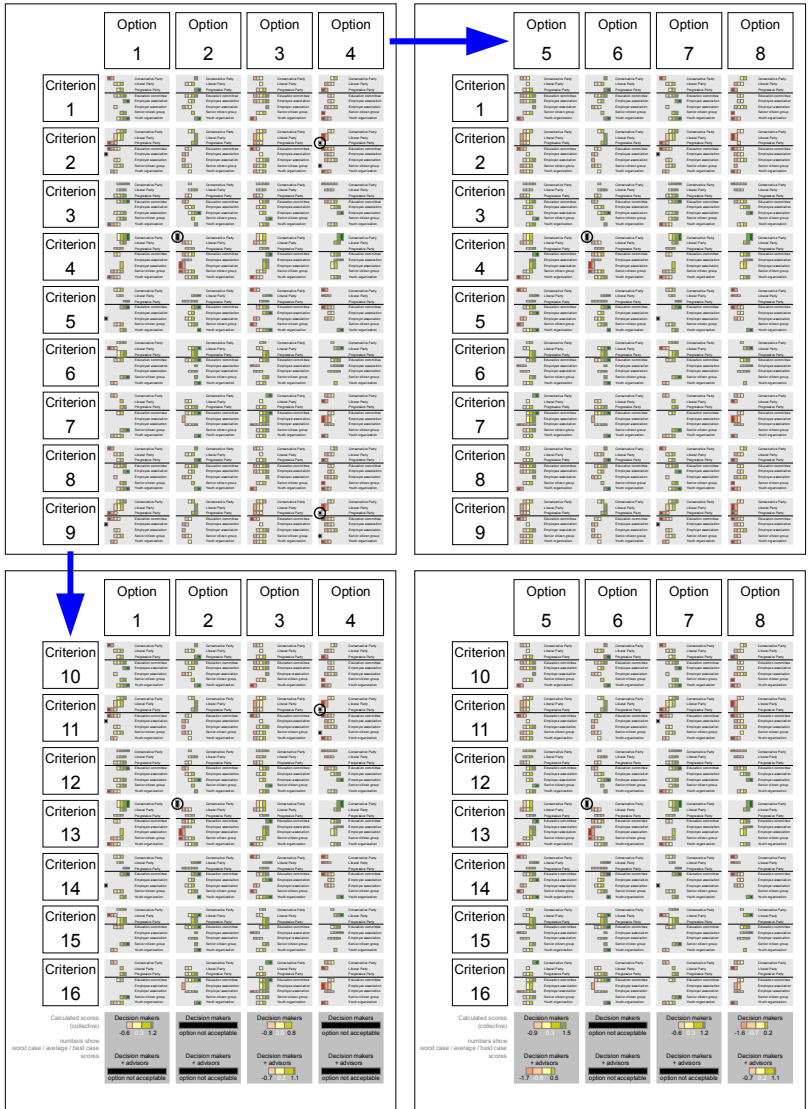
The decision makers and their advisors rate (evaluate) the option/criterion combinations here.

Calculated scores (points) for acceptable options are shown here.

Fig. F.10e : 1 minute summary

1 minute summary

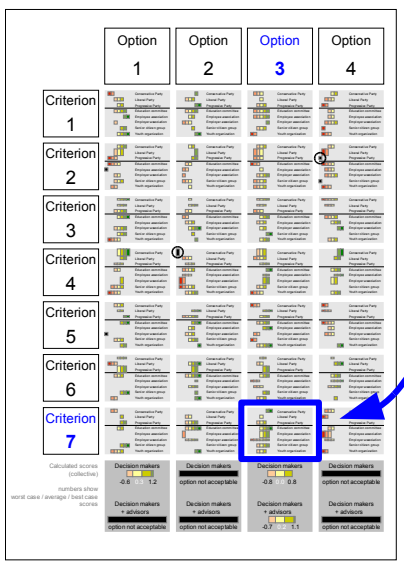
(multi-party decision matrix)

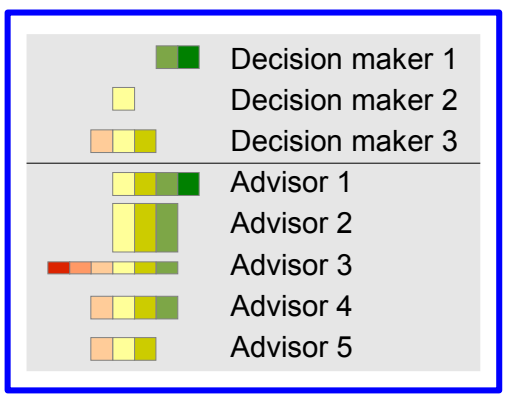


If necessary, the diagram can extend over more pages.

1 minute summary

(multi-party decision matrix)





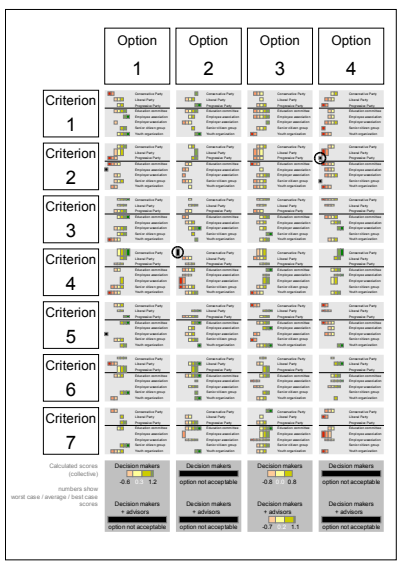
This is how option 3 is rated on criterion 7.

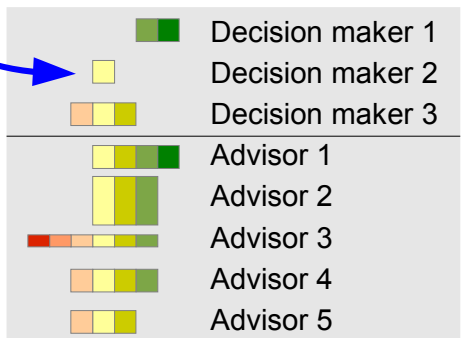
Fig. F.10g : 1 minute summary

1 minute summary

(multi-party decision matrix)

Rating :	not acceptable	very negative	negative	moderately negative	neutral	moderately positive	positive	very positive
Score :	(n/a)	(-3)	(-2)	(-1)	(0)	(+1)	(+2)	(+3)





All ratings are chosen from the scale above.

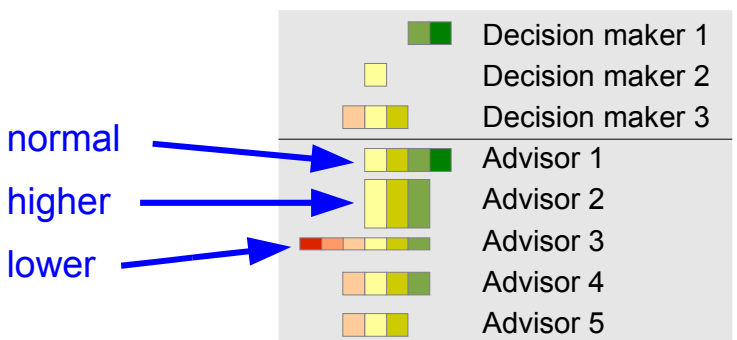
Fig. F.10h : 1 minute summary

1 minute summary

(multi-party decision matrix)

Rating :	not acceptable	very negative	negative	moderately negative	neutral	moderately positive	positive	very positive
Score :	(n/a)	(-3)	(-2)	(-1)	(0)	(+1)	(+2)	(+3)

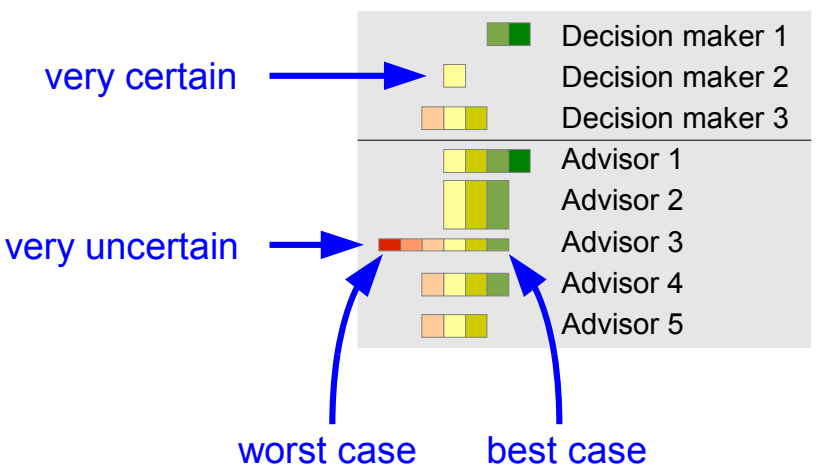
Block height indicates criterion priority (weight).



1 minute summary

(multi-party decision matrix)

Rating :	not acceptable	very negative	negative	moderately negative	neutral	moderately positive	positive	very positive
Score :	(n/a)	(-3)	(-2)	(-1)	(0)	(+1)	(+2)	(+3)



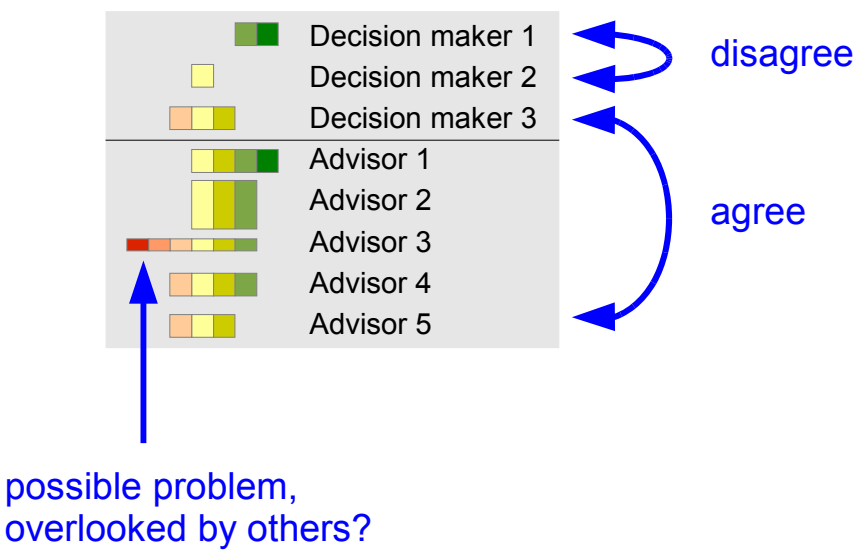
Multiple ratings reflect worst/best case considerations (uncertainty).

1 minute summary

(multi-party decision matrix)

Rating :	not acceptable	very negative	negative	moderately negative	neutral	moderately positive	positive	very positive
Score :	(n/a)	(-3)	(-2)	(-1)	(0)	(+1)	(+2)	(+3)

Similar and diverging views, as well as possible problems, can easily be spotted.



Back to the primary reason for using such diagrams:

They are tools that help you to avoid the problems a bad decision would cause.

(They can even help you to make really good decisions.)

Better decisions,
less problems,
better quality of life.

This is the last page
of this excerpt.

If you've read it: Thank you.